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The Department of Automatic Control & Systems Engineering
is pleased to announce the following seminar:

AHEAD: A New Architecture for Active Defense"

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Italy

Thursday, 21 September 2017 at 14:00

LT08, The Diamond

Abstract

Active defense is a popular defense technique based on systems that hinder an attacker's progress by design, rather than reactively responding to an attack only after its detection. Well-known active defense systems are honeypots. Honeypots are fake systems, designed to look like real production systems, aimed at trapping an attacker, and analyzing his attack strategy and goals. These types of systems suffer from a major weakness: it is extremely hard to design them in such a way that an attacker cannot distinguish them from a real production system. In this paper, we advocate that, instead of adding additional fake systems in the corporate network, the production systems themselves should be instrumented to provide active defense capabilities. This perspective to active defense allows containing costs and complexity, while at the same time provides the attacker with a more realistic-looking target, and gives the Incident Response Team more time to identify the attacker. The proposed proof-of-concept prototype system can be used to implement active defense in any corporate production network, with little upfront work, and little maintenance.

Biography

Luigi V. Mancini is full professor at the University of Rome "La Sapienza", and the director (Presidente) of the Master degree program (Laurea magistrale) in Cybersecurity. The current research interests of Luigi V. Mancini include: cloud computing security, network and information security, and user privacy. Luigi V. Mancini published more than 100 scientific papers in international conferences and journals, and has received more than 5000 citations. He has served on the program committees of several international conferences, among which: ACM Conference on Computer and Communication Security, ACM Symposium on Access Control Models and Technology, European Symposium on Research in Computer Security, and Financial Cryptography and Data Security Conference. Recently, he has been the General Chair of the 32nd International Conference on ICT Systems Security and Privacy Protection - IFIP SEC 2017, held in Rome, Italy in 2017. He is the founder of the several Master degree programs in Information and Network Security at the University of Rome "La Sapienza". He participated in numerous national and international research projects in the area of security and privacy, and in particular, he is the local coordinator of the SUNFISH project, <http://www.sunfishproject.eu/>, funded by the EC Horizon 2020 research and innovation programme under grant agreement No 644666. Currently, he is the Deputy Director of the Research Center of Cyber Intelligence and Information Security (CIS) of University of Rome "La Sapienza" <http://www.cis.uniroma1.it>.